

# Editorial

# JOURNAL BOX

Being that time of year again, let me wish you all the compliments of the season. If you are like me, the year has slipped by and only about half the things I was going to do have been done.

I haven't yet finished my entry in the Association's Competition - have you? Then maybe you have forgotten all about them. Well you still have time - entries close with the Federal Secretary at the end of January. See page 78 Journal 99 for some details, any other queries to your Branch-Secretary; if he can't help you then contact the Federal Secretary.

Then there is also the Norm Robinson Trophy, for the best Article in Journal for any calendar year, and the John Treseder Trophy for the best photograph reproduced in Journal each calendar year. Any one who submits an article or supplies photos is automatically included in these competitions. That reminds me, on looking through this year's Journals, I find that I have forgotten to publish the name of the last winner of the Norm Robinson Trophy. It was won by Bob Dunn, with his article on building four wheel wagons. Sorry about that Bob, please accept my apology.

However, thank you all for your articles, without which this magazine could not exist. Keep up the good work, and I trust that I will be in contact with more members in 1973.

## COVER PHOTO.

Dear Father Christmas.....

This photograph was taken at the 10th Sydney Model Railway Exhibition by J. Parker.

## VOLUME 21.

## Issue 101

### CONTENTS.

Secretary's Desk.	124
Modelling trees.	125
Point motors - another type.	128
Casting lead.	131
An out-door railway.	132
Sydney's 10th Exhibition.	135
Basic sidings & goods train running.	140
Better model railway electrics.	142
Pop Valve.	144
Branch reports.	146
News from other clubs.	148
Book review.	149

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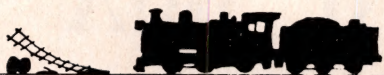
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# THE SECRETARY'S DESK



This year, subscriptions generally have been returned promptly. Quite a few failed to return the account form as requested, more than one returned the account form and the cheque followed later. Some times a cheque on its own is a bit of a puzzle, unless the signature is decipherable, or the bank location gives a clue. Not all cheques have the customers name printed on them, although this is increasing as the computer catches up.

We learned that four members had passed away during the year and that quite a number of members have new addresses, but as yet from a proportion just nothing.

A good number did return the slip on Hobby Shop addresses, just over a third returned a ballot paper. Twenty sent back nomination forms for the committee, but with one exception, all nominated present members of the C.O.M. (and we thought we may have been voted out for putting up the fees). Rex Little has indicated a willingness to carry on as Editor, and Jack Treseder as Publisher, unfortunately, Mal Baker found it necessary to resign as Advertising Manager. The C.O.M. expresses its thanks to Mal for his efforts in this position during the last two years.

At the time of writing this, the position was still vacant.

For those members who complied with our requests, thank you, as it does help the Federal Registrar in compiling new lists and records. For those that did not, see if you can do better next time.

The Advisory Panel is still in existence, but not overworked, Pop Valve has been popping. It is good to see some can make the effort to write to the Editor and express an opinion, keep it up.

Pleased to see some new contributors for material in Journal, all the more the merrier. A warm welcome is extended to all our new members and I ask you to fully participate in the activities of AMRA. More satisfaction is gained by active participation than by a passive role. If anything of your particular interest does not appear in Journal, a letter to Pop Valve could well bring response from some other member with a similar interest, there being so many facets of model railways, a fact which I think is responsible for it still holding its appeal as a hobby to such a wide range of people from all walks of life. A New Years Resolution could be for us ALL to do a bit to foster and expand the interest in the hobby.

I take this opportunity on behalf of the C.O.M. to wish you one and all the Seasons Greetings.

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## FOR SALE

M.E.W. Kit for 44 Ton Diesel Switcher, cab altered like NSW 79 class. Best offer received by 1st. Dec.

Athern Kit SW 1500 Diesel. \$12.50 posted.

Gus. Durham, 17 Clarence Rd, ROCKDALE. NSW. 2216. Phone 599 7552.



# MODELLING TREES

Photos by R. LITTLE.

by CEDRIC ROLFE.

I think that, without doubt, one of the most difficult projects in Railway modelling is scenery, if a true to life effect is to be obtained, and in this particular sphere, modelling realistic trees heads the list.

Most of the commercial trees are either too expensive or too obviously artificial. Some modellers use rubberised horsehair, steel wool, flock or lichen attached to either twigs or twisted wire. These methods have their advantages and I do not wish to "rubbish" anyone else's ideas, but I have always thought that there must be better ways of simulating trees and shrubs and over a number of years I tried all sorts of different ideas to obtain a really satisfactory tree. The type that has withstood the test of time and criticism is made from nothing less than nature herself.

Most people take a trip into the country from time to time, so anybody who is interested should do this during the Christmas school holidays or up to the Easter break. Be prepared however, and take along a cardboard carton and some strong cotton or fine string, or even better a number of rubber bands. As well be sure to be equipped with a pair of scissors, secateurs or a good sharp knife. A pair of secateurs is to be preferred.

The trees to be modelled are composed of the seed heads of the common tussock which may be found along the roadside, beside creeks, on the edge of waterholes and in fact, in most places where there is an abundance of water. They are never found in dry areas, but can be seen in all states of Australia.

If the only specimens available are seen in a paddock, don't just get out



of your car, climb the fence and cut them because this is an offence and you may be prosecuted. Instead, go to the farmer's house and seek permission, which in 99% of cases will be willingly granted. Some times you may even receive assistance. A word of warning here. At this time of the year snakes are very prevalent and their favourite places are near waterholes and curled up among the tussocks, so wear a pair of stout boots and carry a stick. One morning I spent about an hour and obtained sufficient heads to make about 200 trees, so collecting samples is not very time consuming.

In obtaining these seed heads, I do not cut each one individually but grasp a handful of stems and cut them down about six inches below the lowest seed head, then using a rubber band, string or cotton, fasten them together in a bunch and stand them upright in a carton. (Cutting by the handful is much quicker and more convenient and the unwanted material may be removed later on). Do not cut them and lie them flat in the



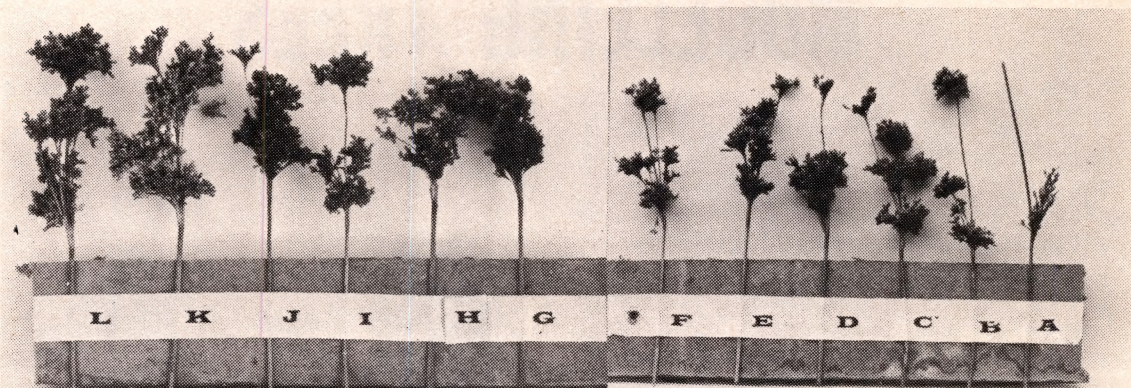


Fig. 1.

carton as a large number of heads may become entangled and will be broken when removing them later. If tied in bunches and stood up, the heads are protected and are easily removed when making up the trees. As soon as possible, obtain a bottle of formalin and using a strong solution, dip or spray the specimens to protect them from mice and weevils. Allow them to dry as quickly as possible to avoid any possible discoloration. As soon as they are dry, you may commence making the trees which are suitable for any scale. Use single specimens for N gauge, or a var-

iety of specimens together which will make trees up to 18" or more in height.

The illustrations of made up trees are in HO so I will describe the making of these trees in this scale. Those who model in other scales can easily adjust.

In Fig. 1 the twelve specimens are labelled from the right A to L and I recommend that you discard any that in any way resemble A or B. In A you will notice a dry stem which is usually found in most instances and these must be carefully removed before making up. Any of the specimens C to L may be selected to form individual trees which may be divided into several categories.



Fig. 2.

THICKLY WOODED AREAS. Here the trunks of trees are normally straight with an absence of branches at the lower levels and are reasonably similar in height. Therefore select five or six specimens and adjust them to form a natural appearance (Fig. 2), then bind them together as shown in Fig. 3 using No. 40 machine cotton and place in a prepared rack and continue with the remainder.

SMALL CLUMPS OF TREES OR INDIVIDUAL SPECIMENS. Owing to their exposure, these trees are usually mis-shapen and the lower branches are fairly close to





Fig. 3.

the ground. Sometimes the wind may have torn some branches from the trees or broken them. In some cases the trees have been cut down resulting in multiple growth. Perhaps one may have been struck by lightning and there is a weak regrowth (Fig. 4 left). to obtain the twisted shape of these trees, use fine copper or malleable steel wire, threading up carefully inside the pithy centre of the stems. After assembling and binding, bend and twist as required (Fig. 4 centre). The regrowth trees may be made by using a dry twig and binding a bushy type of head near the base.

FLOWERING AND ORNAMENTAL TREES. Fig. 4 right can be made by selecting two or three heads, binding them and spray painting them. While the paint is still wet, dust them with coloured sawdust.

FRUIT TREES. Select suitable specimens and after binding and painting, glue on suitable coloured beads.

The method of treating the trunks of these trees may be done in several ways.

- (a) by taping with narrow masking tape (Fig. 3) and then painting.
- (b) by binding and giving several coats of aquadhere before painting.

- (c) by binding, painting with aquadhere, dusting with plaster and then painting.

When a large number of trees is required, make a rack from a piece of Burnie Board or three ply by boring  $\frac{1}{2}$ " holes equidistant about 3". As each model is bound place it in the rack. When the rack is full, spray paint them an olive green for eucalyptus, light green for orchard trees and dark green for citrus.

WARNING. Do not place these trees where they may be continually brushed or knocked for they will undoubtedly fracture.



Fig. 4.





# POINT MOTORS-ANOTHER TYPE

The purpose of this article is to tell you how I applied the Triang X156 point motor for under-baseboard operation of hand-made points with the aid of a hand drill, soldering iron and some oddments of metal and wire. You may gain from it some idea to work on in your own way; after all that's what "Journal" is all about. (Yeah? What about Pop Valve?). Here are the questions that faced me and the answers I employed:

by ALLAN WINSLADE.

## 1. Why use the Triang X156 point motor?

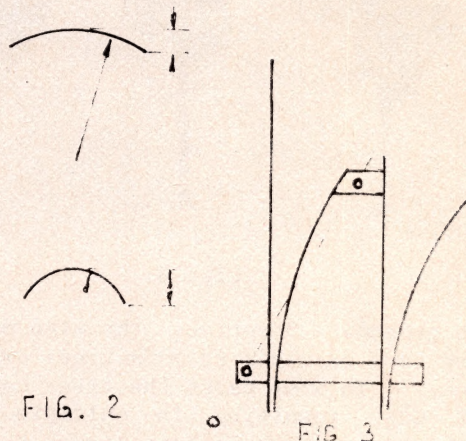
Because I purchased a number of them very, very cheap at a sale, that's why. This type has a straight in-out movement of about  $3/16"$ , see Fig.1.(1), but when mounted beside the track has a most un-railwaylike appearance. I didn't juggle them around for long before deciding to hide them under the baseboard.

## 2. How can the movement be transmitted up through the baseboard?

The simplest way I could see was to drill through the baseboard and have a straight spindle to rotate to and fro, see Fig.1 (2). An arm at each end of the spindle receives and delivers the motion, see Fig.1 (3),(7). Nothing new about this, but it spawned another problem, i.e. how do you get the spindle through the hole when it has a lever fixed to each end? More about that later.

## 3. What length of arm at each end of the spindle?

Both arms must be the same length to get the full movement of the motor. However, a shorter arm gave too much rise and fall in its curved path, so the longer the lever the nearer we get to straight line motion, see Fig.2. I chose 1" length after trying several others.



## 4. Will operation be from within the rails or outside the track?

Things that project up between tracks tend to foul on the uncoupling pegs or certain couplers when you least expect it so I chose to operate from outside the tracks. The simplest geometry was to align three centres when drilling; (a) point blade pivot, (b) lever hole in sleeper, and (c) the vertical spindle, see Fig.3.

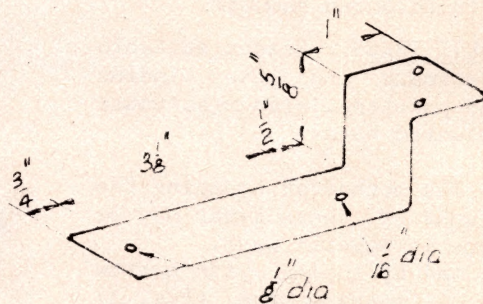
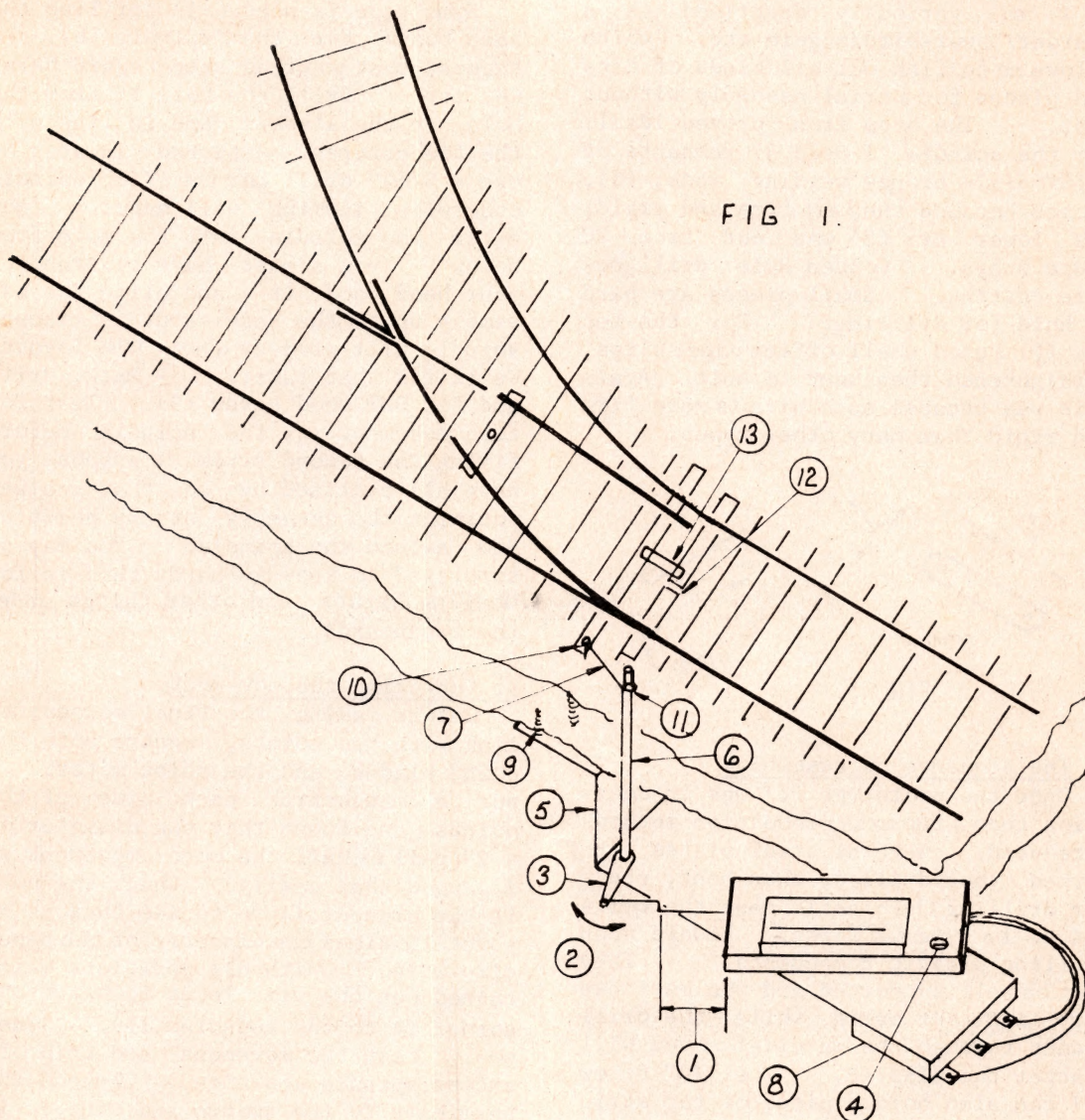


FIG 4





5. How can the point motor be held below the baseboard?

The type in question has to be the right way up to work, so I drilled and bent a piece of 1" x 1/16" steel as shown in Figure 4. Actually it was some 1" galvanised hoop iron left over from binding some fencing. The 1/8" hole takes the screw, Fig.1 (4), which

holds the plastic case to the mounting plate (5). The hole in the plastic case had to be drilled in line with the centre of the push rod of the motor so that it would not push the case out of position when working. A screw 7/8" x 1/8" and nut held the point motor to the plate and two wood screws (9) fixed the plate to the baseboard.



#### 6. What materials are used?

I am variously described as a hoarder/bower-bird/magpie etc. which allows me to fish out all kinds of bits and pieces for a trial assembly without cost. The hoop iron proved ideal. For the spindle I used 3" remnants of 1/16" dia. bronze welding rods, (6), chosen because they are firm and rigid. The lower arm (3) was cut from 20 gauge brass. Golden Rule: drill before cutting. Small pieces are hard to hold for drilling. For the top arm (7) I used small office paper clips, straightened then bent to suit. Again this was because such wire is more firm and rigid than many other types.

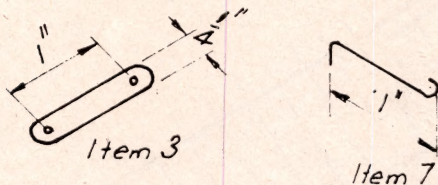


FIG. 5.

#### 7. The sequence of assembly.

Once the prototype (!) was in operation then a few mass production methods were used. Several steel plates were marked, then drilled, then bent, etc. For drilling the plastic case the coils had to be removed first. Beware when drilling plastic components. They must be well supported and you must use very light pressure while the drill breaks through the material or you will shatter the plastic. The 1/8" screw (4) can also hold a piece of tag strip (8) on the back of the plate to give wiring terminals. The lower arm (3) is soldered to the spindle (6) about 1/8" from the end. I stood the spindle in a shallow drilled hole in a block of wood and slid the arm down over it for soldering. This held it quite square. After placing the spindle in the base plate the push rod is then entered in the outer hole of the arm. Line up the casing, push rod and arm before tightening the 1/8" screw finally.

#### 8. Positioning the assembly.

Some care is needed in drilling the base board for the spindle (6). I suggest that you read step 3 again here. Get it? Drill the hole 1" from the hole in the sleeper and in line with the two centres mentioned in step 4. Use a 5/64" drill for the 1/16" spindle otherwise jamming will occur. Now enter the spindle into the hole from below - you almost have to stand on your head to do it - and slide the assembly up to the baseboard. Excess spindle will project above the layout. We'll fix that later. Mark, drill and fit ONE wood screw (9). Test for free movement of the spindle before fixing the second screw. I suppose you have all realised by now that you can position the assembly at any position 360 around the spindle. You may be surprised to know how handy this is for dodging struts and other things under the baseboard!

#### 9. Centering the movement.

Before making the final mechanical link with the points, centre both the point blades and the point motor. I put a matchstick each side of the points and found that the diameter of a 2" nail is half the motor movement so I gauged that easily. Check the hole in the sleeper (10) to see that it is about 1½ times the diameter of the paper clip wire. With all positions maintained put the wire lever in place and solder it to the spindle (11). When cool, test the movement and snip off excess spindle and wire. Connect the terminals to the switch and bingo! it goes.

#### 10. Fine, but what about track power switching?

Well, the points I am operating are hand made by soldering code 100NS to sleepers cut from printed circuit board. This requires a shallow cut to be made with a hack-saw blade near the centre of the sleepers (12) for two-rail working. A small brass wire of shim brass extension (13) is soldered



to the tie bar connecting the point blades and long enough to reach the next sleeper. Movement of the point moves the wiper across the sawcut to pick up the desired polarity to energise the point blades and frog which in turn are wired to the subsequent track-work.

However there is no provision for switching signals or track occupation indicators etc.

11. Do the point motors work satisfactorily on 12v. supply?

Yes. Have fun.

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## Casting lead

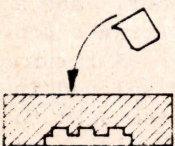
How many times have you wanted to make a bogie, an axle box, or some other item only to find that they were costly or were not the correct type? The following article describes how I overcame this problem.

The item to be cast can be obtained in two ways. Firstly you can buy the item and then make a mould to produce more, e.g. axle boxes for GY trucks, or secondly you can make one from brass or other material by careful filing etc.

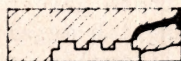
Once the item to be moulded has been obtained the next step is to make the mould. This can be done in more than one way. I will list the methods I have used or heard of.

### 1. Plaster.

The method for making the plaster mould is illustrated in Fig. 1. The first step is to place the item on the bottom of a container e.g. matchbox or similar, and mix up a batch of plaster. The plaster should be fairly thick, if any water appears on the top of the mix (i.e. you have used too much water) either mix it in if you want a relat-



a



b

FIG 1

by 'DIGGER'.

ively slow setting mould, or pour it off. If left on top of the plaster when poured into the container, it tends to weaken the box walls.

When dry, peel away the container and pry loose the object. Be careful here as the whole mould may crack. Air and inlet holes are easily carved in if required.

### 2. Clay.

In this process I used clay obtained from a pottery (I think) many years ago. It is kept in an old ice cream container with a wet rag to keep it moist and pliable.

This may be an easier process than the plaster since once the right sized clay block is formed all that is needed is to press the item into the clay and pull it out again. The clay block is then left to dry. (Fig. 2.)

### 3. Other methods.

Silicone rubber was suggested to me as an alternative. Not having tried it, I would not know its drawbacks. However if it is available, try it by all means.



c

Some adhesive compounds and putties may be usable and could provide good



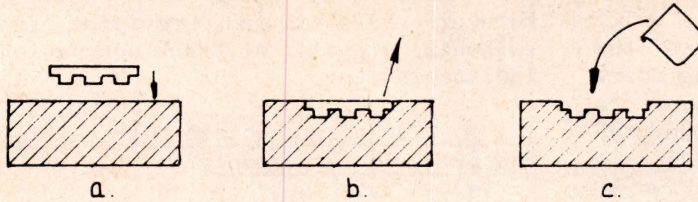


FIG. 2.

results. However beware of the object becoming stuck in the material.

### Conclusion.

To conclude all I want to stress is the dryness of the mould is most important, since when molten lead hits a spot of water it turns to steam and can either cause bubbles in the final casting or a crack in the mould.

For finely detailed work I recommend the clay method since plaster, when dry, tends to go brittle and becomes wedged in the fine detail of the object. Plaster is suited to relatively coarse detail and stands up well to constant use. For the axle boxes of my four wheel wagons I used plaster to cast the back and clay to cast the front and this has worked very well.

My final word is do not sell what you cast. The cost of lead may make it expensive and many companies may have copyrights on their products. Only cast those which you can use yourself.

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## AN OUTDOOR RAILWAY

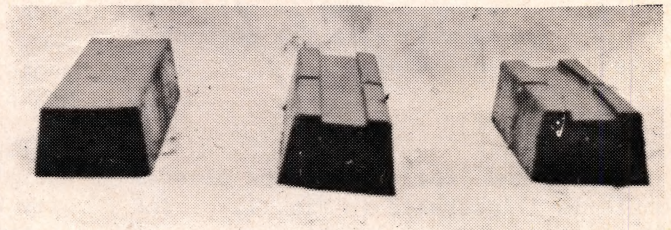
Photos by P. RODGERS & R. LITTLE

by P. RODGERS.

This is a report on a sectionalised OO/HO Garden Railway System that I have developed.

The system is based on pre-cast, reinforced, super-hard, weatherproof concrete blocks. No sand is used and the blocks will not soak up moisture as sand mixes do. It takes a sledge hammer to crack them and they actually get harder with age.

The blocks are merely laid end to end on the ground. The only preparation necessary is to chip the ground to level out inequalities, filling being done with garden soil or sandy mould. It is not necessary to cement the blocks, as due to their wide base and mass they will not shift. Tracks are merely laid in the recess without glueing or pinning.



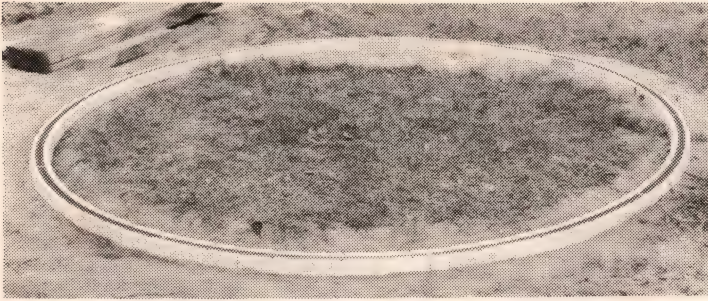
Expansion.

Straight.

Curve.

Perhaps the real advantage of my system is that it can be laid anywhere, altered, modified, and be used again in another place. So far it has proved to be domestic animal proof, and a layout can be constructed, tracks and all in a matter of hours. A far cry from those garden layouts displayed in the English magazines, which seem to take literally years to build, and sometimes require extensive alterations to the garden.





My first test track was approximately 30' long, in a circular formation with approximate 5' radius. This track was in operation for 4 months and the results of this test were so successful that a second track was constructed.

The second track was approximately 65' long. This was comprised of straight, transition, curved, expansion, viaduct and point blocks. This second track has been in position for 3 months to date. This track has also exceeded expectations and further tracks with gradients are under way, to give an expected trackage of approximately 200 feet.

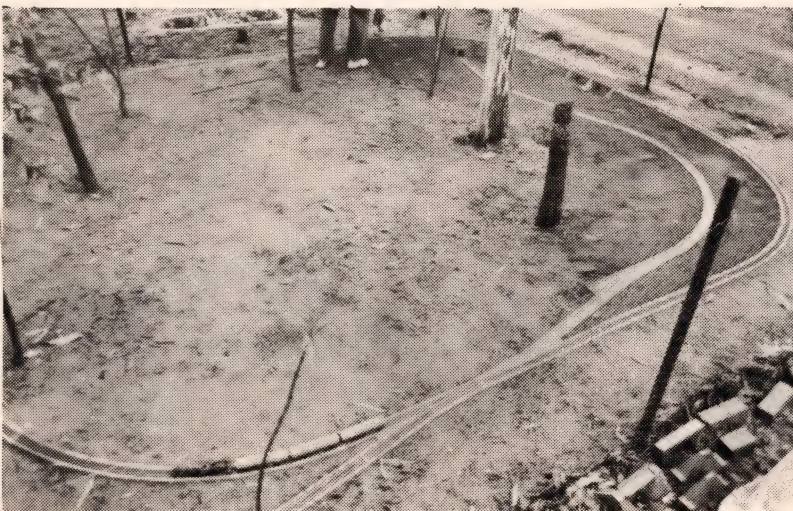
The rail used is Peco Streamline and Peco Points. No trouble has been

experienced with the rail, but the points rust due to metal tabs, switch spring, and the insert for frog wiring. I have written to Peco U.K. for an explanation of the use of ferrous metal in points which Peco claim are suitable for outside use.

Using an old Hornby Dublo throttle type power pack, all sorts of trains have been run on the test tracks. Triang, Hornby, Fleischman, Playcraft, Trix, etc. with rolling stock were tried at all speeds. It was found impossible to derail any, and some were literally hurled around the track.

The track was flooded and if anything, trains seemed to run better. Fine scale stock also gave no trouble. It was realised that summer would be the real test, and provision was made for expansion. Of course on the result so far the track could be hosed down to cool it, or it could be laid in a shady location to obviate this expansion problem.

One of the most satisfying aspects is the absence of noise and smooth realistic running. Trains have been run for long periods, one for 5 hours non stop, without trouble.

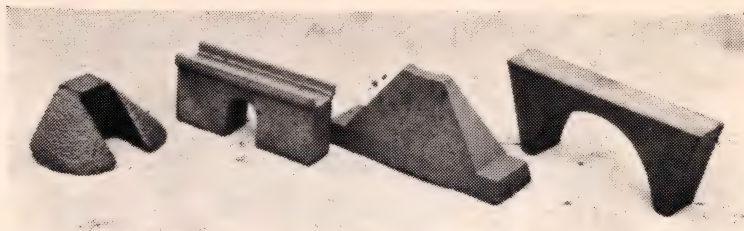


It had been my original intention to start in "O" gauge, but frankly I found that the cost of rails, either hand built or proprietary was prohibitive. Possibly tinplate would have been ideal if it was galvanised. Regrettably stainless steel



has too high an electrical resistance.

Points are now hand set, the point spring having been removed. A metal slug (solder) is placed underneath in a recess in the block and keeps the point set much more firmly than the spring.



Exploded view of viaducts and buttresses.

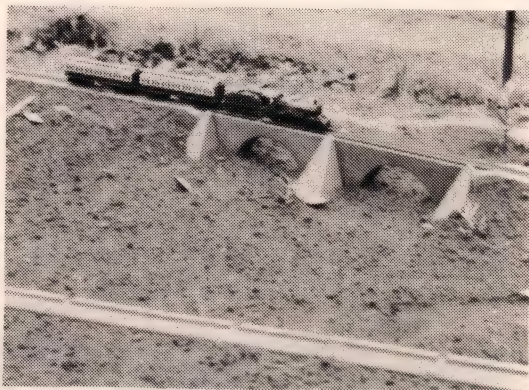


The arrangement of concrete blocks for a point.

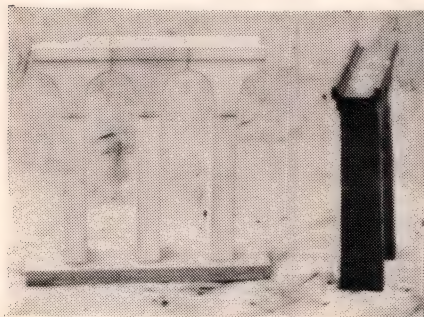
Point blocks are moulded to receive either large or short radius points, and curves are super elevated. Adequate clearance has been allowed so that even the lowest bogies or vehicles with maximum overhang will not scrape on the sides.

The blocks can be moulded in any desired colour, but I have found green to be the coolest and more in harmony with the surroundings. The length of the blocks vary, the longest being 12". This was designed to give flexibility to the system, and allow for the hydraulic action of rain and soils.

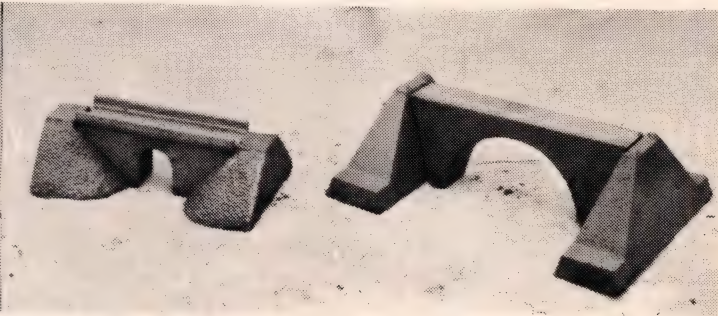
Visiting modellers are invited to visit the layout at my residence, and may bring their own train if they wish. The location is 199 Western Highway, BLAXLAND, next to Westward Ho Transport Cafe. This is midway



A realistic scene.



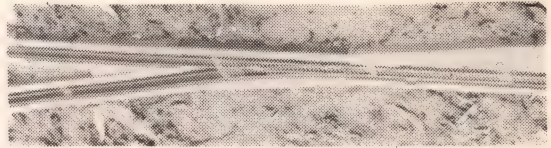
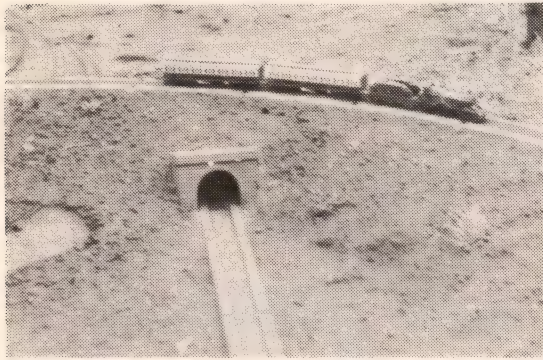
High level bridge.



Assembled viaducts.



between Warrimoo and Blaxland, 9 miles from Penrith and 22 miles from Katoomba. Look for the Garden Railway sign.



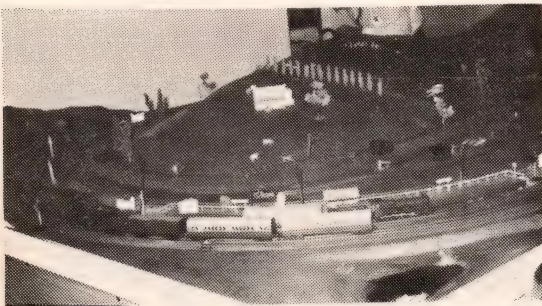
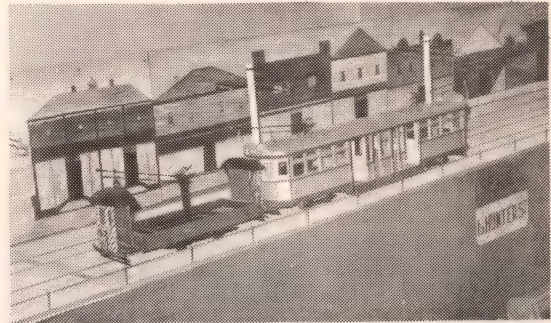
True this may not be the first Garden Railway in N.S.W., but I bet it is the first trouble free system which any modeller can lay and operate in a matter of a few hours work. What is more, it is a reality and not some projected pipe dream, of which I have seen elaborate plans in many magazines including Journal.

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## Sydney's 10th exhibition

As crowds go, this year was a bumper with all and sundry being brought in by the rain which was with us for 2½ days. One of the highlights was the Save the Trams movement which was strongly supported by 3 different layouts, all different, including a large scale, Sydney prototype out and back layout, which included the sound of the Bell. "Clang-Clang".

by BOB GALLAGHER. Photos by J. PARKER.



N scale was well represented by two layouts, the larger by Union Central and typified a U.S. western desert area. The photo shows the multiple unit diesels crossing the picturesque river scene before heading to the lonely sands of the desert.

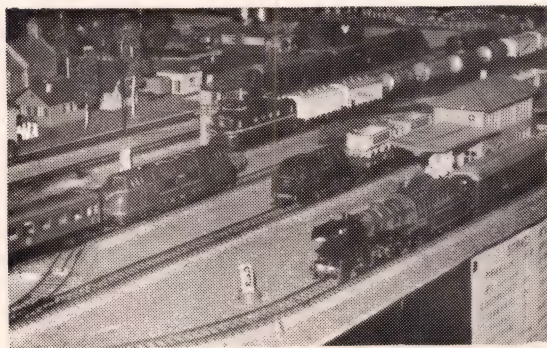
Narrow gauge was strongly represented by AMRA narrow gauge which has five separate layouts joined together for exhibition purposes. Scenery developed from wharfside, town, deserted mining area to the open country and Wunda Rock Mining Company. The photos show a few scenes of this popular display even the young are enthralled by the rabbit burrow style of layout.

Australian prototype was represented by Norm Read & Col Shepherd's O gauge ever so popular, and the photo shows





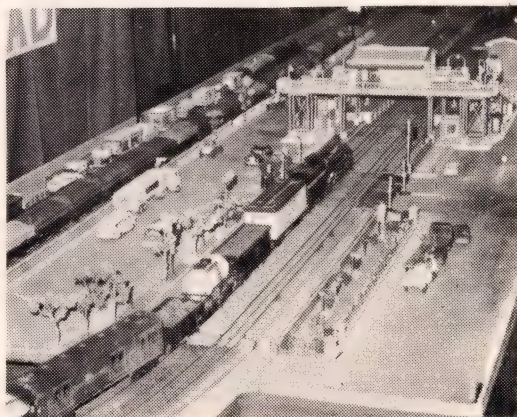
the station area of this gigantic display. Next, in size, was a layout of Stanwell Park - Coal Cliff, part completed, by the Model Workshop Group. The layout showed scenery and trains usually found on the NSW South coast and featured the famed Stanwell Park viaduct. The smallest of the NSW style layouts was displayed by N.S.W. Model Railway Club and featured a double main track with a single track for coal workings. This layout uses code 70 track with full working signals and the range of locomotives & rolling stock featured the ultimate in HO scale NSW prototype modelling.



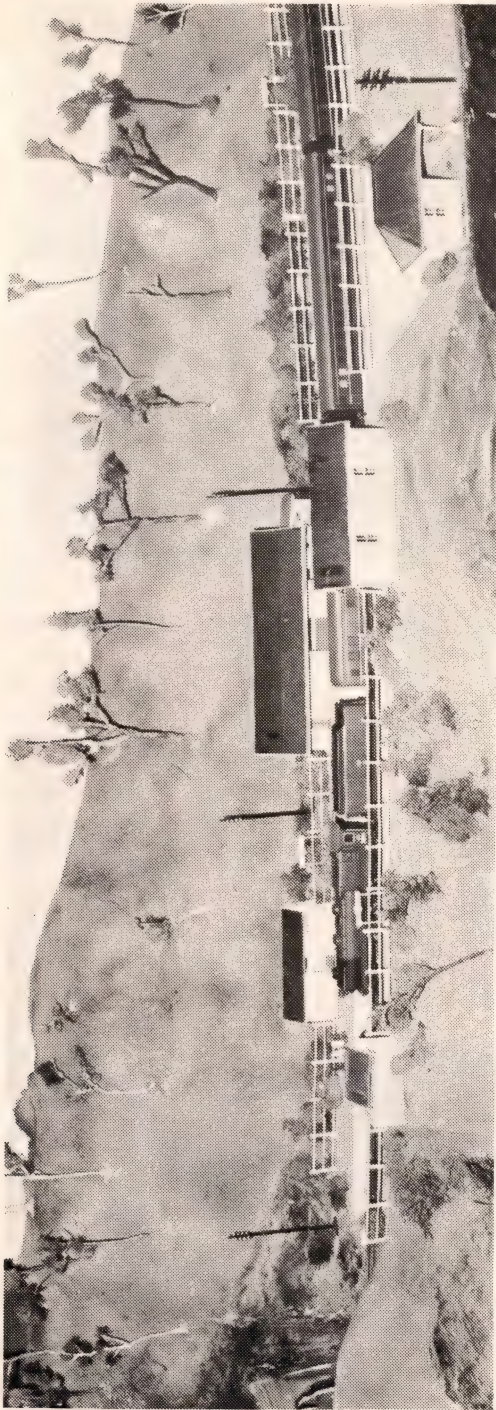
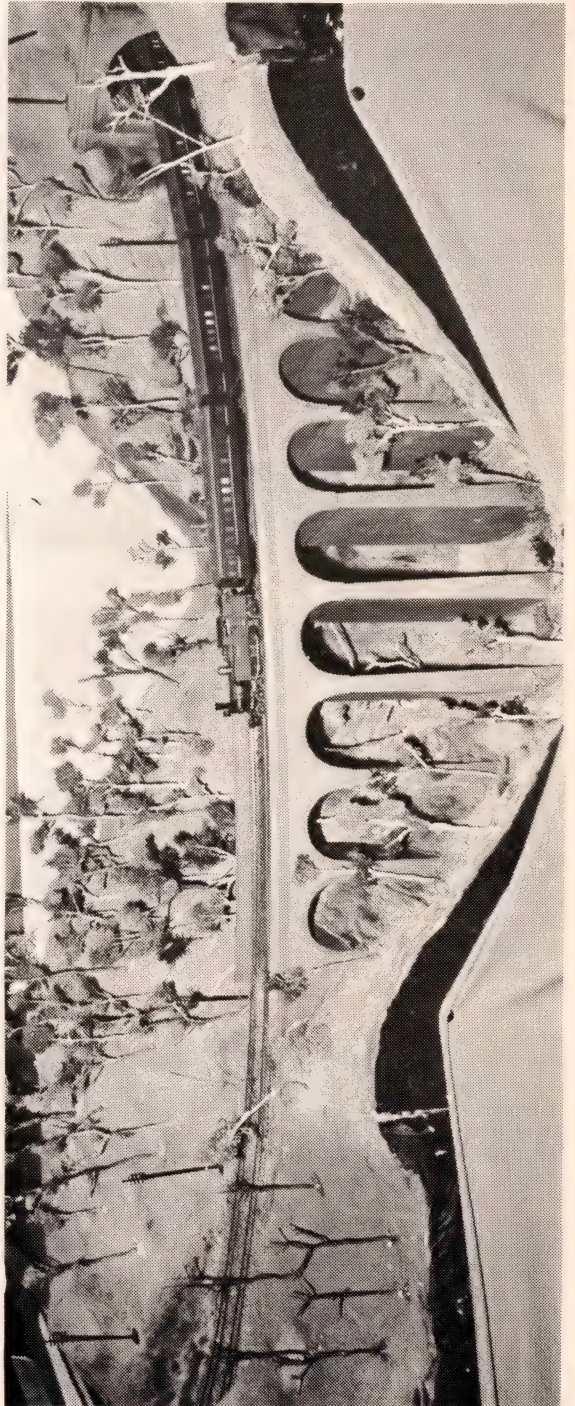
Many other layouts, held the crowd well and among these were K. Robinson's Marklin layout; a couple of wellsceniced English & Continental style displays and of course the ever present display of the little trains by Arthur Sherwood.



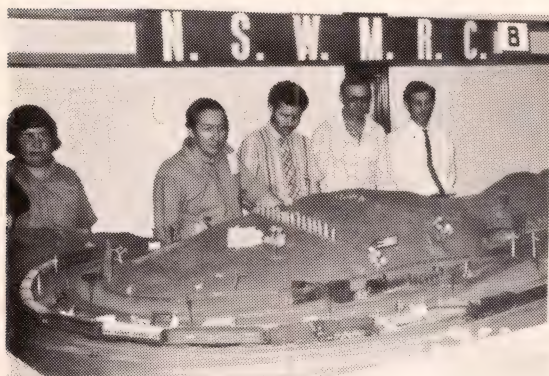
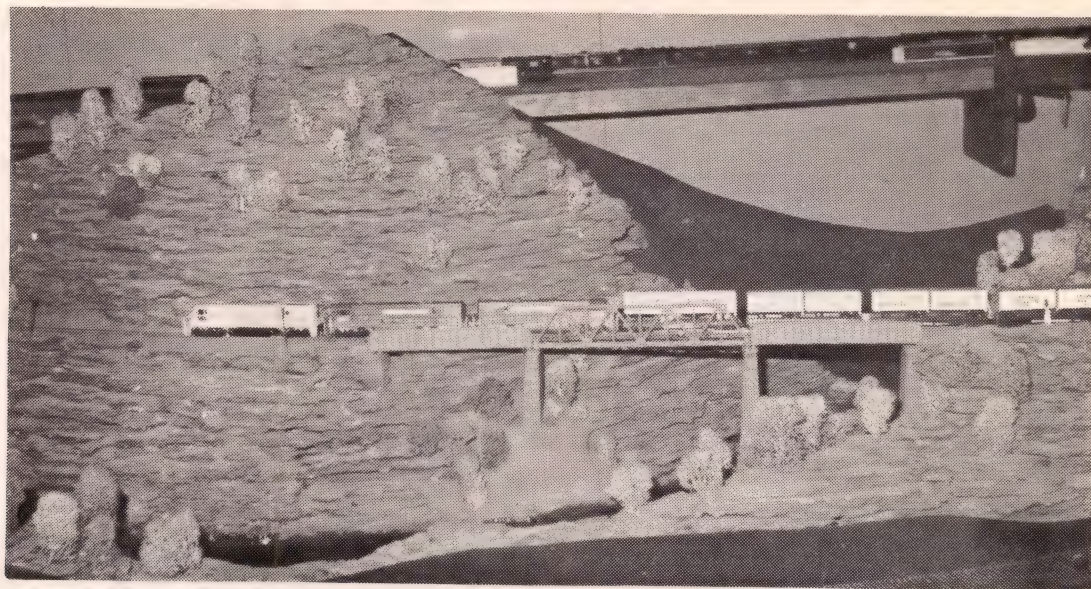
Static displays were showing work by the Plastic Modeller Association, and Sydney Society of Model Engineers, while the usual range of books and records were on display.



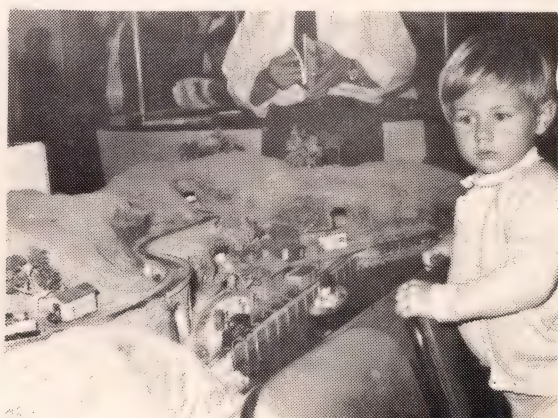






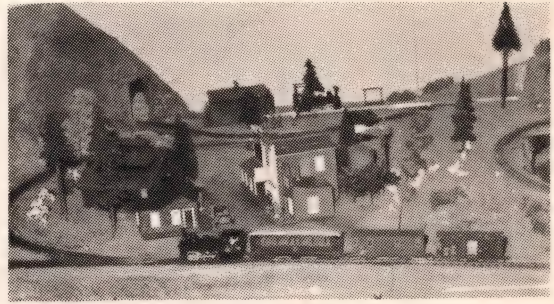


One feature of the Exhibition was the introduction announcement by the trade, of new products. Rail Transport Museum released their 1973 calendar and announced the publication of "West by Steam", featuring the trip of the Western Endeavour in 1970. Traction Publications released the long awaited book on passenger coaches of the NSW by L.A. Clark and the NSW Division of A.R.H.S. released the book on Railways of J. & A. Brown by Gifford Eardley. All publications are recommended for their value to Australian Model Railroading.





Mr. G. Berg announced his new projects, a D57 and a tin hare (CPH) rail motor as well as displaying the proposed C30. Fantastic Hobby Shop announced the close release of the Lima Railways of Australia series and only missed out by 4 days having a display of these incredible models on the shelf.



We all look forward to 1973, and the 11th Exhibition.

\*\*\*\*\*  
MEMBERSHIP LIST.

Please note the following change of addresses:

Aroin, D.J.	C/o. 67 Union Street, Northcote. Vic. 3070	
Atlee, J.D.	Whyalla Road, Tyers. Vic. 3844	
Bailey, D.A.	2 Darling Place, Sylvania Waters, N.S.W. 2224	
Baker, A.B.	28 Gordon Street, Mosman. N.S.W. 2088	
Boycott, G.P.H.	C/o. Berwick, P.O., Berwick. Vic. 3806	
Brown, G.H.	C/o. 135 Bowes Avenue, Airport West. Vic. 3042	
Bush, K.M.	3 Salisbury Street, Coburg. Vic. 3058	
Csetnegi, L.	Unit 24, 117 Denison Road, Dulwich Hill, N.S.W. 2203	
Harris, A.T.	1 Beatrice Street, Darwin. N.T. 5790	
Hodson, P.	13 Aylesford Way, Thornlie. W.A. 6108	48073.
Houghton, G.R.	2440 Paramenter Boulevard, Apt.211, Royal Oak, Michigan, U.S.A./	
Hoye, W.R.	Flat 6, Villa Victoria, 555 Victoria Road, Ryde, N.S.W. 2112.	
Hutchinson, J.	5 Cleland Street, Ringwood. East. Vic. 3135	
Inchley, E.	92 Clayton Road, North Clayton. Vic. 3168	
Innes, K.W.	32 Liatoki Street, Mansfield. Q'ld. 4122	
Jenkins, T.	23 Russell Street, East Hawthorn. Vic. 3123	
Marsh, K.J.	34 Worrell Street, Nunawading. Vic. 3131.	
Martin, A.A.	21 Koornalla Crescent, Mt. Eliza. Vic. 3930	
Miller, D.	Flat 1, 162 Oxford Street, Woollahra, N.S.W. 2025	
Mol, G.J.	30 Krichauff Street, Page. A.C.T. 2614	



Prospect Model Rail. Club C/o. R. Lockitt, 31 Adelaide Street, St. Marys. N.S.W. 2760  
 Rayner, S. C/o. Bureau of Meteorology, Aerodrome, Port Hedland. W.A. 6721.  
 Scott, A.H.G. 1/17 Cabena Crescent, Chadstone. Vic. 3148  
 Shepherd, J.H. Unit 24, 117 Denison Road, Bulwich Hill, N.S.W. 2203  
 Thorpe, I.R. 209 Chuter Avenue, Sans Souci. N.S.W. 2219  
 Tomlin, N.A. 13 James Street, Lidcombe. N.S.W. 2141  
 Watson, G.R. 4 Albermarle Way, High Wycombe, W.A. 6057  
 White, N.D. R.S.D. Bungeet, via Devenish, Vic. 3726  
 Wilson, I.S. 53 Tyabb Road, Mornington. Vic. 3931  
 Wood, R. 7 Rankin Road, Hastings. Vic. 3915  
 Manchester Model Railway Society, C/o. D. Baxter, Flat 2, Heald Bank,  
 Longham Road, Bowden, Cheshire. U.K.

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## Basic Sidings & Goods Train Running

DIVIDED TRAINS. (part 7)

by E.G. WATSON.

After a train has divided in the section the driver may, if both portions of the train have stopped close together and there is no signal box near either end of the train, set back and couple up to the rear portion. No doubt this is the way we all handle it on our Model Railway.

Where this is not possible in prototype a whole bagfull of rules and regulations come into force. As signalmen, the main one that concerns us is the rule that the right line must be used where possible. On our Model Railway we could handle the divided train in several ways.

### SINGLE LINE.

We have a loop available ahead of the train. The moves are not detailed as they have been covered in shunting.

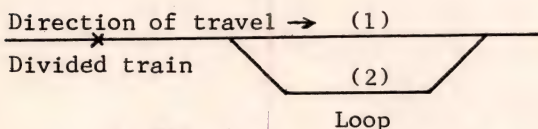


Fig. 1.

Place front portion in track 2, return to rear portion, bring forward to 1, couple up and away.

Where only sidings can be used, the nearest one into which the leading portion can be pushed must be selected.

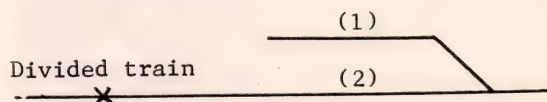


Fig. 2.

Push leading portion into siding, bring rear portion to 2, couple up and away.

It will be noted that we are only using our 3 basic shunt moves, 1 set down, 2 pick up and 3 run around. We have only used two basic train movements forward and reverse.

So a quick reference to your layout and siding accommodation and a couple of uncoupling ramps in the right place and you should be able to clear a divided train in a workman-like manner.

### DOUBLE LINE. (See Fig. 3)

The driver must travel on the correct line as much as possible. "A" siding presents no problem. If "B" is the only siding available, the driver would not cross at "1". He would bring the leading portion forward to "2", cross



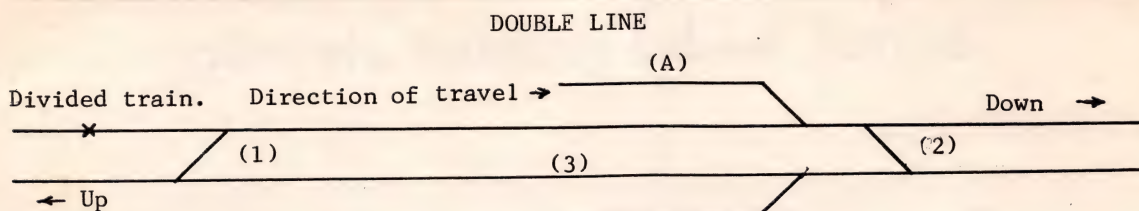


Fig. 3.

over, and push it into "B". He would then travel on "up" line to "1", cross over, couple up the rear portion, back over "2" leave this section west of 2 points, and proceed to couple the front portion up.

We can vary this on our layout by selecting sidings in various positions rear or front of the divided train, up or down line, or using a loop.

#### OPERATING TRAIN SERVICE

##### DURING A BREAK DOWN.

Not all break downs in service are caused by trains. We could have a washaway, landslide, or partial power failure.

Where only one line on a double line was effected we could work "double line over a single line".

Where both lines are effected we can run a limited service to the nearest

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#### AMENDMENT OF SECTION 21 OF CONSTITUTION.

The following figures are the result of the ballot for the amendment of Section 21, Para (b) that Article 7 clauses (b) & (c) now read:

(b) Earns his living wholly by the manufacture and/or sale of model railway equipment, rolling stock, parts or accessories, either to scale or toy proportions.

(c) Primarily and principally supplements any other income, by the manufacture or sale of model

stations either side with a suitable cross over, and have a bus to take passengers around the break down area.

We would need to check our power situation here. If it isn't isolated sufficiently, careful time tabling could cover any difficulties.

The same applies to single line isolate or time table. Subject to the comments earlier on "orders" we could run our trains close to the break down area, and arrange transportation around it for the passengers.

While we cannot run "through" trains, we can run a limited goods-passenger service. This comes in handy if we have some trouble on our Model Railway and a section is "out" for repairs. Visitors come, close the area, run as above, put a suitable sign near it "Line Closed For Repairs" or some such to cover the situation.

railway equipment to such an extent, that in the opinion of the Committee, the person concerned is considered to be a professional modeller within the definition of these clauses (b) and (c) of Article 7.

Total "Yes" Votes	-	176
Total "No" Votes	-	25
Informal Votes	-	8
Total Votes Received		209

CHRISTINE LUMSDEN.  
Returning Officer.



# Better model railway electrics

## COMMON RETURN WIRING.

This is the first of a series written by Allan Dowel based on his experience as electrical engineer with the Melbourne Model Railway Society.

Probably one of the most beneficial electrical principles to adopt in a model railway, COMMON RETURN wiring, remains suspect in the minds of many modellers.

To give the reader some confidence, let me start out by saying that Common Return wiring is used:

- (a) to wire your house and your car,
  - (b) to wire telephone exchanges,
  - (c) to wire most aeroplanes,
  - (d) to wire your radio and T.V.,
- so why should you use any other method to wire your model railway?

The advantages of common return wiring are:

1. The amount of wire is drastically reduced, as apart from the common return wire only one wire is used for each track section, each point motor coil, each lighting circuit, each signal lamp or meter, etc.
2. Track needs to be insulated (with insulating fish-plates) in one rail only in most places.
3. Switches for all of the items listed in 1 above need only to be "single pole" types.
4. A split potential power supply can be used in which one power pack runs everything on the layout, trains, points, signals, relays, lights, etc. (This is the subject of the next article in this series).

The only disadvantage that I know of is that you cannot run a train non-stop through a "turning section" (without some real fancy wiring). A "turning section" is either a turntable, a wye,

by ALLAN DOWEL.

or a loop - any track configuration on which you can turn a loco around and run back on the same track. It is interesting to note that on the first two of the three - turntable and wye, you would have to stop anyhow, so there is disadvantage only in relation to the "out and back" loop. If a station can be located in this area, then a stop can be tolerated, and no disadvantage remains.

In any case the disadvantage is far out-weighed by the tremendous advantage. We had a wye on the second M.M.R.S. layout. When the trains ran onto the dead-end of the wye the points were switched for its return, and the point motor contacts switched power to the dead-end. Thus we used to drive in and out of the dead-end without altering the controller reversing switch.

On the new M.M.R.S. layout we have a "turning section" comprising a mountain route. Drivers will be instructed that they must stop for a brake check at the summit. And while they are stopped? You guessed it, someone operates a reversing switch, which permits the train to continue in the same direction, but only after operating the controller reversing switch.

Some of the cheaper power packs have "16V. AC." and possibly "12V. DC. uncontrolled" outlets, which are fed from the same secondary winding of the transformer. Only one of the outlets can be connected to Common Return. This is not considered to be a great disadvantage, as such outlets cannot be used to supply very much current without affecting the train supply. There is no problem if the outlet is fed from a separate secondary winding, as in some H & M packs.



Common Return Wiring can be defined by saying that we run a heavy bare copper wire right around the layout. On the M.M.R.S. layout, we split some electricians earth wire (7/.029) into 3 and 4 strands for our common return wire, and ran it tightly through staples in the bottom of our timber joists, more or less following the main track runs.

all. One could be the cheapest Triang pack, and the other a transistorised controller, provided of course that they are not both fed by the same transformer secondary winding.

I could draw another drawing showing two power supplies and an AC. accessory pack all using the same common return, but you only have to combine Figs. 1 & 2

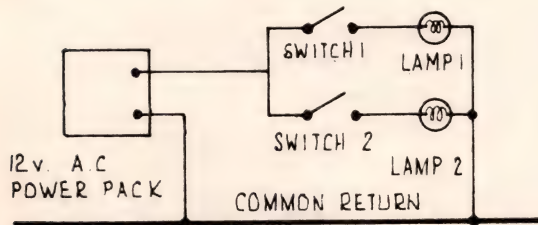


FIG. 1. ONE POWER SUPPLY

To this common return wire we connect one side of every power supply (AC. or DC.) and one side of every device, be it track section, point motor, lamp signal. This is shown simply in Fig. 1. (one power supply) and in Fig. 2 (two power supply). Note that only one wire has to be run from switch to lamp, or switch to track section.

At this point I would like to dispell one incorrect criticism of common return wiring. The two power packs shown in Fig. 2. can be any type at

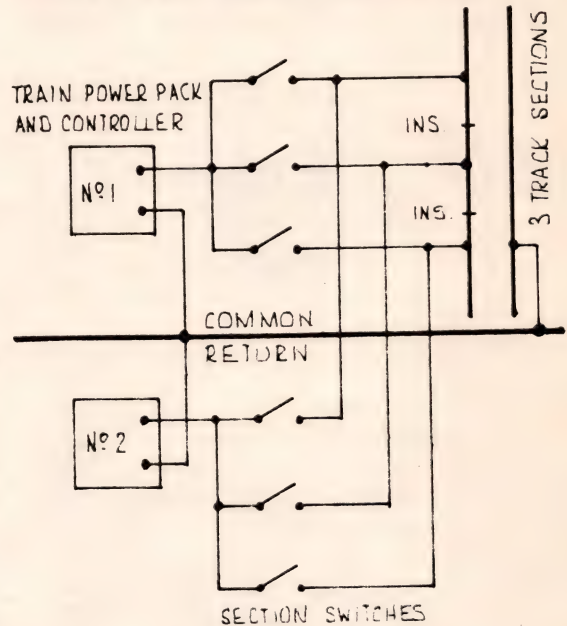


FIG. 2. TWO POWER SUPPLIES

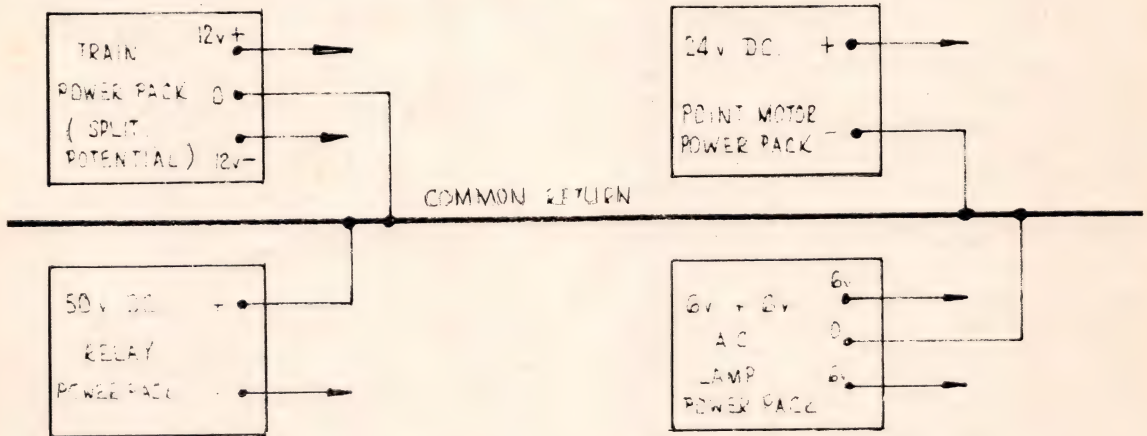


FIG. 3. FOUR POWER SUPPLIES (M.M.R.S.)



to get the same result.

To emphasize this though, I will draw the M.M.R.S. power systems in Fig. 3. Note that we have four power sources, all with one connection to the same common return.

One side of every point switch, piece of track, lamp circuit, relay circuit, signal circuit, telephone circuit, etc. is connected to Common Return on the M.M.R.S. layout.

Finally, in answer to that much asked question, "wont the two currents from two different power packs get mixed up?" The answer is no. The current gremlins from different power packs are quite snooty.

Having done their job in driving a train, lighting a lamp, or operating a point motor, they are interested only in getting back to their own power pack by the easiest route, and this easy route is the COMMON RETURN.

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## FOR READER'S LETTERS

The Editor,  
AMRA Journal.

Dear Sir,

Correspondence that has been appearing in recent issues of the Journal arguing for and against a suggested merger of the S.C.M.R.A. and A.M.R.A. bring to mind the question do we really need to remain a Federal body. Could we not do better if disbanded into separate State organisations. The AMRA was originally formed, according to potted histories that have appeared in Journal, to try and encourage the use of common track standards and a nice packet of such standards is issued to each member at his first, and quite often only association with the Federal body. These track standards were copied from the appropriate N.M.R.A. standards in use in the early 1950's and are therefore, not exclusive to the A.M.R.A. As the greater majority of the members use a commercial brand of track, usually Peco, and as the greater number of those who scratch build their track use current N.M.R.A. standards the success of the A.M.R.A. "standards" can be seen. Correspondence in the Journal makes it appear that even the N.S.W.

Branch does not use these standards on their exhibition layouts. So it appears that the main reason for the formation of the A.M.R.A. as a Federal body is no longer valid.

Another reason for the formation of the A.M.R.A. is given as "fellowship with other model railway enthusiasts", but this is valid only on a State level, the great majority of the membership have not met the members in other states and a visit to another Branch is just like a visit to another club, there is no feeling of belonging.

We are told that the formation of the AMRA would enable like modellers to speak with one voice to the manufacturers. The A.M.R.A. has been with us for 21 years now but I doubt if the great majority of the manufacturers have heard of the organisation.

So much for the "advantages" of the Federal body, now what of the disadvantages. The main one is of course finance. We are charged four dollars a year to belong to the Federal body, what happens to this? Twenty cents is given to the member's branch if, and only



if he renews within a certain time. Should he be late renewing, his branch misses out on what is the only money his branch receives from his membership fee. Another \$1.80 goes to the cost of the Journal according to the 30 cents price posted on the front cover of that magazine while the remaining two dollars goes to "administrative costs". Yet it costs the Victorian members, if not the other Branches as well, at least another \$1.20 per year to be a member of A.M.R.A.

This is of course the twenty cents entry fee to the branch meetings and this amount is the basic source of branch funds as, at the present time, the Federal body tells the States they must be self-supporting. This extra fee is not told to persons applying for membership to the A.M.R.A. So what do we get, financially, out of being a member of a Federal body? The answer - nothing we could do just as well, if not better as separate State bodies.

New South Wales, Victoria and Queensland are purchasing their own club rooms, no help was given by the Federal body for these purchases. The members are expected to raise the funds for these over and above the annual membership fee. No portion of an individual member's membership fee goes towards his own clubrooms. Everything a Branch acquires the individual member pays towards over and above the annual subscription.

I don't for a moment, suggest that annual subscriptions could cover the running of the branches or the purchasing of property, but the members could see what is happening to their money. At present they do not know what happens to the majority of the annual subscription. It is also not suggested that the Federal Committee is misappropriating this money, such a suggestion is ridiculous in the extreme, but it is felt that the individual branches could do more with the annual

subscriptions that is happening at present.

My proposal is, therefore, that the A.M.R.A. be broken up into separate State organisations or, alternatively, it is reconstituted so that the State Branches get greater control of the A.M.R.A. finances with the advantages that will flow on to the membership in general.

ERNEST F. RADDATZ.

Dear Sir,

In answer to Arthur Robinson's letter may I be permitted to answer, or rather explain reasons for my first letter. Firstly may I say that I do not hold any animosity towards SCRMA in general, in fact many of my friends belong to SCRMA and I have given them some assistance with their magazine and all things being equal an amalgamation would be great. BUT, for a marriage to take place both parties must meet on equal terms and contribute evenly, and at present this equality does not exist, at least not at headquarters (NSW). SCRMA publishes a good magazine, maybe the best in Australia, but it is run by a small band of overworked officials. The enthusiasm of the general committee and membership was shown by the combined stand of AMRM and SCRMA at the Sydney Model Railway Exhibition when the said stand was left unattended for a period exceeding one hour during the middle hours of the last day. Is this the way to promote Model Railways?

Now, just for a second, let's assume that amalgamation has taken place. I would ask you to show me how it would be possible to produce both magazines on our present membership fee and I would direct you to Canberra where another magician, each year, tells us how he can balance the budget without any extra cost. If you will not buy AMRM for \$2.10 per year, you are missing out on the cheapest publication in our hobby.



Why would not a combined A.M.R.A.-SCMRA Association be an Australian Model Railway Association? Very easily answered. The Association would be Aussie in form but not name. SCMRA is a legally registered name and any amalgamation would assume their name. This I have been told by a high ranking official when the union was first suggested in 1969-70.

My impression, at this present time is that if the union took place AMRA officials would be responsible for the general membership while SCMRA would be responsible for the publication (AMRM) while Journal would be relegated to a club car column in AMRM. Why should we kill a good project (Journal) just to give a so called united front to the manufacturers.

Let's face it. If a manufacturer wishes to make a C38 on a 4-4-4 chassis with a Z19 tender who is to stop him? NO ONE. A prominent wholesaler in Australia still promotes a scale of 3.75mm to the foot even when all and sundry have gone to either HO or OO. The Australian modeller has grown up; he recognises the difference 0.5mm to 1 ft. makes to a model, and has settled on a set scale of 3.5mm to the foot on which all manufacturers and importers of Australian prototype kits have based their products except the products put out by the one main offender. It is very easy to bring all manufacturers

into line. Abstain from purchasing their stock.

My sympathy goes to the Sunshine division of SCMRA-AMRA, for to me it is obvious, that the members up there are keener than the head body. May be in a few years things may change but I doubt it, so we are left to the simple function of fellowship and I suggest that it be used to convert the SCMRA members to AMRA members, still keeping AMRM as it is now; run by 7 to 10 very keen members of our hobby.

Good luck in your combined venture  
Arthur.

BOB GALLAGHER.

Dear Sir,

Due to my error a letter written by me was published in the "News from other Clubs" under the heading "Prospect Model Railway Club" rather than was intended in "Pop Valve" in the Mar/Apr issue.

I must advise that the last paragraph was my own personal view and not necessarily of the Club as a whole, and I would like to take this opportunity of retracting the implication made.

My sincere apologies to Bob.

MIKE GUEST.

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## Branch Reports

### WEST AUSTRALIA.

Over the past months the W.A. Branch has been developing steadily and we have now reached the stage when two meetings per month are needed to satisfy the members. These meetings are held in the lesson hall of the Ross Memorial Hall, on the corner of Hay and Collins

Sts. West Perth, commencing at 7.30 pm. The formal monthly meeting is held on the first Monday of the month and the other, an informal meeting, on the second Wednesday, but country or new members attending their first meeting should contact our Secretary, Graham McKay, first. Phone 946 543.



Our October auction was a very successful affair with over sixty people in attendance, resulting in a welcomed sum of money for the branch coffers. Because of the interest shown in the auction, it is planned to hold one every six months.

Other highlights from past meetings have been displays or some hand-built brass locos, a novel track cleaning loco and some EM gauge equipment; talks on, layout visiting etiquette, planning and building layouts, and converting 3 rail Hornby locos to two rail; and a couple of very enjoyable film evenings. If you want to participate in these informative and very enjoyable activities, WA members, then you only have to attend either or both meetings each month.

The branch has also formed a library for the benefit of the members, and books and magazines can be borrowed at each meeting, however, our librarian, John Grey, would like to see some more books and American magazines donated to the library, so how about it???

Finally, if you are one of our members that we have never met, come along and enjoy the greatest benefit of A.M.R.A. Membership - Fellowship!!!

G. WATSON.

The 10th Annual Exhibition held in the Sydney Lower Town Hall over the Labor Day Holiday weekend was quite successful and we all give our thanks to John & June Dunn, and Graham & June Larmour. Without this foursome our Exhibition would not be possible.

Most activity of late has been concentrated on the Exhibition, but a little time was spent on the layout projects. The new HO/OO layout is taking shape as shown by the mass of cork ballast spread all over the place, while the N gauge layout is steadily progressing under the watchful eye of Hilton Shepherd. Please remember the 2nd Saturday of the month - layout construction day - all scales - particularly N scale. With luck, these notes will reach you by the Festive Season and the President John Dunn, supported by his henchmen (NSW Branch Committee) wish all members the best for Christmas/ New Year.

The clubrooms will be open during the holiday break and all are invited to the many operating days, but one and all are asked, requested and commanded, to attend the Annual General Meeting. If you have a problem, or believe the Branch should be doing something different, come along and voice your opinion.

#### December.

Sat. 2nd Auction - Bring your money with you.

Fri. 8th Modelling Clinic.

Sat. 9th Layout construction.

Sat. 16th Visit to Rail Transport Museum, Enfield. Contact A. Brown for particulars. Phone 50-6720.

Fri. 22nd Layout operation.

#### January, 1973.

Sat. 6th Layout operation.

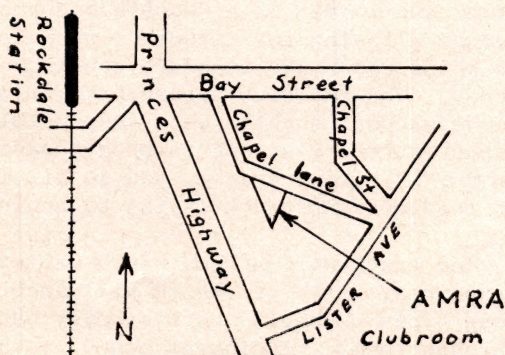
Fri. 12th Modelling clinic.

Sat. 13th Layout construction HO/OO, N & O scale.

Sat. 20th PICNIC - contact Secretary, A. Brown.

Fri. 26th Layout operation.

#### NEW SOUTH WALES.

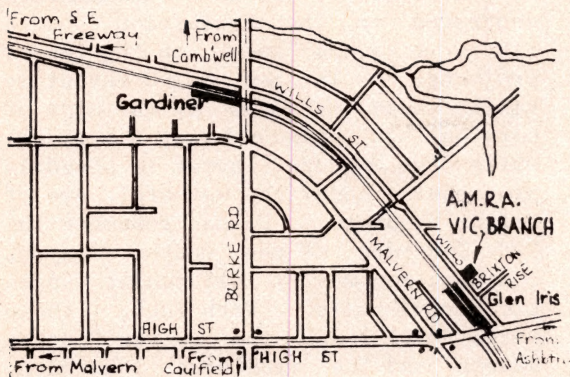




February.

Sat. 3rd ANNUAL GENERAL MEETING.

BOB GALLAGHER.

VICTORIA.

We extend the usual invitation and a reminder that meetings are still held in the clubrooms on the second Thursday of each month.

The following activities are planned for the next three meetings:

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## NEWS FROM OTHER CLUBS

### WESTERN AUSTRALIA MODEL RAILWAY CLUB.

The news from the W.A.M.R.C. is that the club has a new venue, and so is in the process of building a new layout. Increasing incidents of vandalism forced the move from the KarraKatta railway station to a building within the Showgrounds at Claremont, only about one mile from the old club rooms.

Few tears were shed over the fact that the old layout had to be demolished however, most of the track and structures were salvaged to be used on the new layout. The prospect of designing and building a layout has rekindled the

Dec. 14th Running Night and Christmas Party. Competitions:

1. Layout or part thereof.
2. Collection of the years competitions for the Bob Edwards Trophy.

Jan. 11th Running Night.

Feb. 8th "Hacksaw and File night".  
(Kit Bashing - Talk by Rex Little Esq.) Competition:  
Australian Hopper Wagon -  
Scratch built or modified kit.

Don't forget the Childrens Christmas Party on 16th December, 1972, \$1.00 per head - covers cost of gift for children under 10 years of age. Contact Social Organiser Brian Chester after 5 pm. Phone 459-5453.

Do you realise that it is now sixteen months since we purchased the Clubrooms and the property committee still require workers to finish painting etc. etc. Remember that the building is YOUR clubroom so let us all get shoulder to the wheel and finish the place and then we can relax a little.

Branch Reporter

enthusiasm within the club, with most members attending every Thursday night to help with the project. The new layout is to be housed in an 18'x 16' room and to be of a "double dogbone" design allowing for either a long point to point run or two separate continuous runs. The two club carpenters, Frank Goode and Don Laughton were responsible for an extremely strong baseboard based on the "L" girder system, and so all is in readiness for track laying to begin.

The track will be Peco with a variety of points, all of which will enable most types of wheels to efficiently pass through them. Equipment owned by the



members includes examples of most of the different wheel profiles.

As construction is in process, visits may not always be convenient. Please contact the secretary, Don Laughton, first. The club is looking for a limited number of experienced modellers to become members.

G. WATSON.

#### NORTH SHORE RAILWAY MODELLERS' ASSOC.

The North Shore Railway Modellers' Association as part of its expanding activities in Model Railroading and associated fields proposes to hold a Model Railroading convention at a date to be decided - approximately one years time.

We envisage that the convention will be for the duration of one weekend commencing with a dinner on the Friday evening and followed by a comprehensive two day program of activities associated with our hobby. This would include model and photographic competitions, films, outings to places of interest, etc.

We understand there has not been a convention of this type in Sydney since the late 1950s and it is our belief that the time is ripe for a get-together

of all Railway Modellers, Rail Fans, and Trade representatives etc, so that we may know one another and expand our horizons.

A suggestion has been made that accommodation for out of town visitors could be provided by those who live in the Sydney area.

It will be appreciated that if this convention is to be successful we will require the co-operation and assistance of other model railroad clubs and interested individuals.

In order that we may judge the potential of this convention would you please advise as soon as possible whether or not you would be interested in attending a function of this nature.

Your comments and suggestions on the following points would also be appreciated:

- (a) Suitable dates,
- (b) Accommodation of out of town visitors,
- (c) Competitions,
- (d) Items of interest or entertainment,
- (e) Any other matters.

John H. Thomas, Secretary, N.S.R.M.A.  
28 Park Avenue, Waitara, NSW, 2077.

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## **BOOK REVIEW**

#### PERIOD RAILWAY MODELLING BUILDINGS.

by Vivian Thompson

Vivian Thompson gives the reader a brief introduction of how and why she began in this type of railway modelling. She tells of her experiences hoping that those who read this book can learn from her mistakes and there are recommendations on how to go about modelling various types of buildings as well as the way of achieving authenticity with

the actual building when detailed plans are available and by using photographs from all possible sources when detailed plans are not available.

The types of buildings covered in this book are :- Station buildings in brick, stone and wood, sheds - loco and goods, signal cabins and other railway buildings together with general hints and tips and scale drawings of 9 of the buildings described.



Having read this informative book, although orientated about 4mm to 1 ft, there should be no difficulty in adapting the ideas, recommendations and experiences of Vivian Thompson to any scale.

For any modeller contemplating modelling railway buildings this book would be an asset in their reference library. Price \$5-55.

#### BUCKINGHAM GREAT CENTRAL.

by PETER DENNY.

Peter Denny tells, how over 25 years, what he has achieved and how he managed to do "all my own work". In Model Railways you need either of two commodities, time or money, of which he had only time, so that Buckingham Great Central grew to a plan of sorts and to make this possible he had to be "a jack of all trades, but master of none."

Peter explains why and how he became interested in model railways, including the various gauges he has tackled. Every aspect of the hobby receives a mention with examples of mistakes made, as well as quite a few recommendations. To quote, "yet a model railway is far more than a collection of railway models".

The chapter headings show the aspects covered and these are: "How it all began; If at first you don't succeed; No sure foundation; Spring in the garden; A house at last; To each his own; A new look; Running to time; Town and country planning; Fact and fiction; The source of power; All my own work; and Constructional methods".

An inspiring book with many ideas that can be adopted to suit any scale or gauge. It strengthens the comment that I make when talking to a new railway modeller, that "model railways do not have to be expensive if you are prepared to put in time instead of money."

For the modeller who wants to do most things for himself, this book is a must for his reference library or personal collection. Price \$11.20.

J. L. Kimpton.

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